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- (b) a vector comprising any of the purified exogenous DNAs of (a);
- (c) a purified exogenous RNA, or a purified exogenous RNA encoding an exogenous protein or peptide;
- (d) a vector comprising any of the purified exogenous RNAs of (c); and
- (e) a purified exogenous antisense RNA, purified exogenous ribozyme RNA or a purified exogenous RNA or purified exogenous DNA which inhibits or prevents the expression of undesired protein or proteins in a mammalian cell,

and further comprising operatively linked elements sufficient for one or more of the following:

- (i) replication of said constituent; or
- (ii) expression of said constituent; or in subcase (e)
- (iii) prevention of expression of said undesired protein or proteins;

in said mammalian cell,

wherein the infectivity of the packaged recombinant nucleic acid is increased relative to the infectivity of unpackaged recombinant nucleic acid.--

--2. (Amended) The complex according to Claim 1, further comprising additional SV40 protein or proteins, preferably SV40 agnoprotein.--

--4. (Amended) The complex according to Claim 1, comprising a mixture of three semi-purified or pure SV40 capsid proteins.--

--5. (Amended) The complex according to Claim 1, wherein said other SV40 capsid protein is semi-purified or pure VP2 or

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- 6. (Five Times Amended) The complex according to Claim 1, wherein said recombinant nucleic acid constituent is:
 - (a) purified exogenous circular or linear DNA;
 - (b) purified exogenous circular or linear DNA encoding a protein or peptide; or
 - (c) purified exogenous circular or linear DNA encoding RNA.
- 7. (Five Times Amended) The complex according to Claim 6, wherein said purified exogenous DNA is DNA which encodes a protein or peptide, wherein said protein or peptide is not made or contained in said cell prior to infection with the complex, or is purified exogenous DNA which encodes a protein or peptide, wherein said protein or peptide is made or contained in said cell in an amount insufficient for proper cell function prior to infection with the complex, or is purified exogenous DNA which encodes a protein or peptide, wherein said protein or peptide is made or contained in said cell in a form inadequate for proper cell function prior to infection with the complex, or encodes a RNA.--
- 8. (Twice Amended) The complex according to Claim 7, wherein said protein or peptide is an enzyme, a receptor, a structural protein, a regulatory protein or a hormone.--
- 9. (Four Times Amended) The complex according to Claim 1, further comprising SV40 ori DNA sequence as a replication regulatory element and further comprising a purified exogenous DNA sequence encoding one or more regulatory elements sufficient for the expression of said exogenous RNA or exogenous protein

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or peptide in said mammalian cell.

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- 10. (Four Times Amended) The complex according to Claim 1, wherein said constituent is purified exogenous RNA, wherein said purified exogenous RNA is RNA which encodes a protein or peptide which is not made or contained in said cell prior to infection with the complex, or is purified exogenous RNA which encodes a protein or peptide which is made or contained in said cell in an amount insufficient for proper cell function prior to infection with the complex, or is purified exogenous RNA which encodes a protein or peptide which is made or contained in said cell in a form, inadequate for proper cell function prior to infection with the complex, said purified exogenous RNA having regulatory elements, including translation signal or signals sufficient for the translation of said protein or peptide in said mammalian cell, operatively linked thereto.--
- 11. (Twice Amended) The complex according to Claim 10, wherein said protein or peptide is an enzyme, a receptor, a structural protein, a regulatory protein or a hormone.--
- 12. (Four Times Amended) The complex according to Claim 1, wherein said constituent is an exogenous protein or peptide which is, respectively, a protein or peptide which is not made or contained in said cell prior to infection with the complex, or is a protein or peptide which is made or contained in said cell in an amount insufficient for proper cell function prior to infection with the complex, or is a protein or peptide which is made or contained in said cell in a form inadequate for proper cell function prior to

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infection with the complex.--

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--13. (Four Times Amended) The complex according to Claim 1, wherein said recombinant constituent is purified exogenous antisense RNA or DNA or purified exogenous ribozyme RNA, or any purified exogenous RNA or purified exogenous DNA which inhibits or prevents the expression of undesired protein or proteins in said mammalian cell.--

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--16. (Amended) The complex according to Claim 1, wherein said cell is a human cell selected from the group consisting of hemopoietic cells, epithelial cells, endothelial cells, liver cells, epidermal cells, muscle cells, tumor cells, nerve cells and germ line cells.--

--17. (Amended) The complex according to Claim 16, wherein said hemopoietic cells are bone marrow cells, peripheral blood cells, or cord blood cells.--

--18. (Five Times Amended) A method for the *in vitro* construction of SV40 viruses or pseudoviruses comprising a purified exogenous recombinant nucleic acid comprising the following steps:

- allowing a semi-purified or pure SV40 VP1 capsid protein or a mixture of VP1 and at least one other SV40 capsid protein to self-assemble into SV40-like particles; and
- bringing the SV40-like particles assembled in step (a) into contact with said purified exogenous recombinant nucleic acid to give *in vitro* constructed viruses, or into contact with a vector

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comprising said purified exogenous nucleic acid to
give pseudoviruses,
so as to thereby effect in vitro construction of SV40
viruses or pseudoviruses.--

--20. (Four Times Amended) The method according to Claim 18,
wherein in step (a) at least one other SV40 protein,
preferably SV40 agnprotein, is added to the mixture of
said SV40 capsid protein or proteins and said purified
exogenous nucleic acid.--

--22. (Amended) The method according to Claim 18, wherein said
exogenous nucleic acid is circular or linear DNA.--

--23. (Amended) The method according to Claim 18, wherein said
exogenous nucleic acid is RNA.--

--24. (Amended) The method according to Claim 18, wherein said
exogenous nucleic acid encodes a protein or peptide.--

--25. (Four Times Amended) The method according to Claim 22,
wherein said circular or linear DNA is DNA which encodes a
protein or peptide, wherein said protein or peptide is not
made or contained in said cell prior to infection with said
SV40 viruses or pseudoviruses, or is circular or linear DNA
which encodes a protein or peptide, wherein said protein or
peptide is made or contained in said cell in an amount
insufficient for proper cell function prior to infection
with said SV40 viruses or pseudoviruses, or is circular or
linear DNA which encodes a protein or peptide, wherein
said protein or peptide is made or contained in said cell
in a form inadequate for proper cell function prior to

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infection with said SV40 viruses or pseudoviruses, or is circular or linear DNA which encodes RNA.--

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- 26. (Amended) The method according to Claim 25, wherein said circular or linear DNA encodes a protein or peptide which is an enzyme, a receptor, a structural protein, a regulatory protein or a hormone.--
- 27. (Amended) The method according to Claim 18, wherein in step (b) SV40 ori DNA sequence is added and said exogenous nucleic acid has operably linked thereto a DNA sequence encoding one or more regulatory elements sufficient for the expression of said exogenous protein in a cell.--
- 28. (Four Times Amended) The method according to Claim 18, wherein said recombinant exogenous nucleic acid is purified exogenous RNA, wherein said purified exogenous RNA is RNA which encodes a protein or peptide, wherein said protein or peptide is not made or contained in said cell prior to infection with the complex, or is purified exogenous RNA which encodes a protein or peptide, wherein said protein or peptide is made or contained in an amount insufficient for proper cell function prior to infection with the complex, or is purified exogenous RNA which encodes a protein or peptide, wherein said protein or peptide is made or contained in said cell in a form inadequate for proper cell function prior to infection with the complex, and wherein said purified exogenous RNA has regulatory elements, including translation signal, sufficient for the translation of said protein in said mammalian cell, operatively linked thereto.--

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--29. (Four Times Amended) A method for the *in vitro* construction of SV40 viruses or pseudoviruses comprising a constituent, wherein the constituent comprises a purified exogenous protein or peptide, which method comprises the following steps:

(a) allowing a semi-purified or purified SV40 VP1 capsid protein or a mixture of VP1 and at least one other SV40 capsid protein to self-assemble into SV40-like particles; and

(b) bringing the SV40-like particles assembled in step (a) into contact with said purified exogenous protein,

so as to thereby effect *in vitro* construction of SV40 viruses or pseudoviruses.--

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-30. (Amended) The method according to Claim 29, wherein said SV40 viruses or pseudoviruses are purified from any non-packaged protein.--

--31. (Amended) The method according to Claim 29, wherein said exogenous protein or peptide is a naturally occurring or recombinant protein or peptide, a chemically modified protein or peptide, or a synthetic protein or peptide.--

--32. (Amended) The method according to Claim 31, wherein said exogenous protein or peptide is a protein or peptide not made or contained in a cell prior to infection with the complex, or is a protein or peptide made or contained in said cell in an amount insufficient for proper cell function prior to infection with the complex, or is a protein or peptide made or contained in said cell in a form

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inadequate for proper cell function prior to infection with the complex.--

--33. (Amended) The method according to Claim 32, wherein said cell is a human cell selected from the group consisting of hemopoietic cells, muscle cells, tumor cells, nerve cells and germ line cells.--

--34. (Amended) The method according to Claim 33, wherein said hemopoietic cells are bone marrow cells, peripheral blood cells, cord blood cells, or liver cells. -

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--35. (Five Times Amended) A method for the *in vitro* construction of SV40 pseudoviruses comprising a recombinant nucleic acid constituent wherein said recombinant constituent comprises purified exogenous antisense RNA, or purified exogenous ribozyme RNA or purified exogenous RNA or purified exogenous recombinant DNA which inhibits or prevents the expression of undesired protein or proteins in a mammalian cell, comprising the following steps:

- (a) allowing a semi-purified or pure SV40 VP1 capsid protein or a mixture of VP1 and at least one other SV40 protein to self assemble into SV40-like particles; and
- (b) bringing said SV40-like particles obtained in step (a) into contact with said purified exogenous antisense RNA, or purified exogenous ribozyme RNA, or purified exogenous RNA or purified exogenous recombinant DNA which inhibits or prevents the expression of undesired proteins in a mammalian cell,

so as to thereby effect *in vitro* construction of SV40

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pseudoviruses.--

--37. (Four Times Amended) The method according to Claim 35, wherein in step (a) at least one other SV40 protein, preferably SV40 agnprotein, is added to the mixture of SV40 capsid protein or proteins and the purified exogenous antisense RNA or purified exogenous ribozyme RNA or purified exogenous RNA or purified exogenous DNA.--

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--41. (Amended) A mammalian cell infected with the complex of Claim 1.--

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--42. (Amended) The infected cell according to Claim 41, wherein the cell is a human cell selected from the group consisting of hematopoietic cells, muscle cells, tumor cells, nerve cells and germ line cells.--

--43. (Four Times Amended) An in vitro method of transforming a purified exogenous DNA, purified exogenous RNA, purified exogenous antisense RNA, purified exogenous ribozyme RNA, purified exogenous protein or peptide into a cell comprising infecting said cell with the complex of Claim 1.--

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--47. (Twice Amended) A complex comprising semi-purified or pure SV40 VPI capsid protein or a mixture of VPI and at least one other SV40 capsid protein, and a constituent, wherein the constituent is a purified exogenous protein or peptide.